

FACT SHEET
PROPOSED AIR TOXICS REGULATION FOR THE
MINERAL WOOL PRODUCTION INDUSTRY

4-29-97

TODAY'S ACTION...

- ◆ The Environmental Protection Agency (EPA) is today proposing a regulation to reduce emissions of air toxics from facilities that produce mineral wool. Air toxics are those pollutants that are known or suspected of causing cancer or other serious health effects, such as birth defects.
- ◆ Mineral wool is a fibrous glassy substance made from natural rock and/or blast furnace slag. It is widely used as a structural and industrial insulation and in other products, such as ceiling tile, where the fiber is added to provide structural strength, sound absorbency, or fire resistance.
- ◆ EPA worked in partnership with State and local air pollution control agencies, the North American Insulation Manufacturers Association, and representatives of all the mineral wool production companies in developing the proposed rule.

WHAT ARE THE HEALTH AND ENVIRONMENTAL BENEFITS?

- ◆ EPA's proposed regulation would reduce emissions of metal air toxics and particulate matter from cupolas, and formaldehyde and phenol from curing ovens. When fully implemented, this proposal would reduce emissions from these mineral wool production processes by approximately 260 tons per year. This represents a 76 percent reduction from current levels of these air pollutants. All of these air toxics can cause adverse health effects following exposure. Additionally, arsenic is a known human carcinogen, and cadmium, lead, beryllium, and formaldehyde are considered probable human carcinogens.
- ◆ EPA's proposed rule provides flexibility to industry by offering a choice of compliance options, emission limits or percent reduction standards and by using surrogate pollutants to reduce the monitoring and emissions testing costs.

BACKGROUND

- ◆ Under the Clean Air Act Amendments of 1990, EPA is required to regulate emissions of 188 listed toxic air pollutants. On July 16, 1992, EPA published a list of source categories that emit one or more of these air toxics. For listed categories of "major" sources (those that emit 10 tons/year or more of a listed pollutant or 25 tons/year or more of a combination of pollutants), the Clean Air Act requires EPA to develop standards that require the application of stringent air pollution controls, known as maximum achievable control technology (MACT).

- ◆ EPA's published list of industry groups (known as "source categories") to be regulated includes facilities that produce mineral wool.

WHO MUST COMPLY WITH THE REGULATION?

- ◆ There are currently 14 mineral wool production plants nationwide that would be subject to the proposed rule.
- ◆ EPA does not anticipate construction of any new cupolas or curing ovens during the first five years of the regulation.

WHAT ARE THE MAJOR REQUIREMENTS OF THE PROPOSED RULE?

- ◆ In the mineral wool production process, rock and/or blast furnace slag, along with other secondary raw materials, are melted in a furnace known as a cupola using coke as fuel. The molten material is then formed into fiber. In the production of mineral wool products that do not require high rigidity, an oil is typically applied to suppress dust and add some strength to the fiber. The fiber is then sized and bagged or baled. For mineral wool products requiring a higher structural rigidity, a phenol/formaldehyde-based binder is applied to the fiber. The binder-laden fiber mat is then thermoset in a curing oven and cooled.
- ◆ EPA's proposed rule regulates emissions of metal hazardous air pollutants (air toxics) from existing and new cupolas, using particulate matter as a surrogate measure for these metal hazardous air pollutants. Additionally, for new cupolas, EPA is proposing emission standards using carbon monoxide as a surrogate pollutant for the hazardous air pollutant carbonyl sulfide. Emission reductions required by the proposal may be achieved through the use of two control devices, a fabric filter for each existing cupola or a thermal incinerator in addition to a fabric filter for each new cupola.
- ◆ EPA's rule also proposes an emission limit for formaldehyde, a hazardous air pollutant and a surrogate for phenol emissions, for existing and new curing ovens. Existing and new curing ovens would achieve emissions reductions required by the proposal through use of a thermal incinerator.
- ◆ The monitoring, recordkeeping, and reporting requirements are outlined in the proposed rule.

HOW MUCH WILL THE PROPOSED RULE COST?

- ◆ EPA estimates nationwide capital and annualized costs attributable to the proposed standards to be \$2.6 million and \$1.4 million, respectively, for existing sources. These

estimated costs include installation, operation, and maintenance of emission control and monitoring systems.

- ◆ EPA estimates market-level price increases to range from 0.5 percent to 2.1 percent.

FOR FURTHER INFORMATION...

- ◆ Anyone with a computer and a modem can download the proposed rule from the Clean Air Act Amendments bulletin board (under "Recently Signed Rules") of EPA's Technology Transfer Network (TTN) by calling (919) 541-5742. For further information about how to access the bulletin board, call (919) 541-5384. The TTN can also be accessed directly through the Internet at "<http://ttnwww.rtpnc.epa.gov>." For further information about the proposed rule, contact Mary Johnson of EPA's Office of Air Quality Planning and Standards at (919) 541-5025.
- ◆ EPA's Office of Air and Radiation's home page on the Internet contains a wide range of information on the air toxics program, as well as many other air pollution programs and issues. The Office of Air and Radiation's home page address is "<http://www.epa.gov/oar/>."